

ABSTRACT

1
2 A navigable map database, stored on a computer-readable medium and used
3 with a navigation application program, includes data which are spatially parcelized
4 into a plurality of parcels. Associated with each of the plurality of parcels is a first
5 index which associates the area represented by the data in the parcel with a plurality of
6 sub-areas formed of the area. Also associated with each of the parcels is a second
7 index associating each of the data in the parcel with at least one of the sub-areas.
8 Further disclosed is a method for producing a navigable map database which is
9 parcelized into a plurality of parcels, wherein each of the plurality of parcels includes
10 a first index which associates the area represented by the data in the parcel with a
11 plurality of sub-areas formed of the area and a second index associating each of the
12 data in the parcel with at least one of the sub-areas. Also further disclosed are a
13 program and method for finding data in one or more parcels that match a spatial
14 search criterion using a navigable map database that is parcelized into a plurality of
15 parcels, wherein each of the plurality of parcels includes a first index which associates
16 the area represented by the data in the parcel with a plurality of sub-areas formed of
17 the area and a second index associating each of the data in the parcel with at least one
18 of the sub-areas. The program and method use the first and second indices to identify
19 which of the data in at least one of the plurality of parcels satisfy the spatial search
20 criterion.